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Introduction

What is Green Building?

At every stage of the life cycle – from construction to operation to demolition – buildings have a major impact on our environment. Today, there are approximately 5 million commercial buildings and more than 76 million residential buildings in the United States. Together, these structures consume nearly one third of America's energy – much of it wasted by inefficient design. Accounting for 10 percent of particulate emissions, 25 percent of nitrous oxide emissions, 35 percent of carbon dioxide emissions and 49 percent of sulfur dioxide emissions, buildings are a principal source of pollutants that damage urban air quality and cause global climate change. Furthermore, EPA human exposure studies indicate that indoor air pollutant levels may be even higher, 2-5 times and occasionally more than 100 times, than outdoor levels.

By the year 2010, in response to increasing demand fueled by a growing population, another 38 million buildings are expected to go under construction. This presents an exciting opportunity for creative design and innovative construction methods that recognize the limitations on land, resources and materials, and the costs imposed on communities from urban sprawl and poorly planned development. Traditionally, building practices have ignored the interrelationships between a building, its components, its surroundings and its occupants. Our challenge will be to develop and implement improved building techniques that reduce waste, costs and use of nonrenewable resources, while increasing occupant health, safety and comfort.

Sustainable or "green" building is an integrated approach to the design, construction and operation of a building that minimizes negative environmental effects. The basic precepts of green building are based on tenets of sustainability such as the CERES and Hannover Principles (see *Tools*). As a result, green buildings are a model of resource conservation, most notably in their treatment of water and energy efficiency and renewable energy use. A green building minimizes waste and prevents pollution while reducing operation and maintenance costs. In addition to protecting occupant health and improving productivity, green building design addresses issues such as land restoration, historical preservation and access to transportation and other community infrastructure systems.

Green building is not experimental – it is a proven method currently being practiced all over the globe. In the U.S., it is a national requirement for all federal buildings; many states and communities around the country are also implementing sustainable building policies. Nonetheless, some members of the building industry may harbor concerns about the increased spending requirements of resource-efficient buildings. However, by employing integrated, "whole building" design strategies early in the process, sustainability is maximized without a considerable increase in cost. Often, there is a net *reduction* in first cost of green buildings. Even in cases when there is a cost increase, it often pays for itself during the first few years of occupancy and operation. Furthermore, the savings from lower operating costs accrue over the life of the building. Even with a tight budget, many green building features can be incorporated

for minimal or zero increased up-front costs, and generate extraordinary savings as a result.

What is the Green Building Resource Guide?

Capital investors are beginning to realize the advantages of building for the long-term; considering a structure's impacts on waste, environment and productivity in the analysis of costs and benefits. But for many businesses, the costs of exhibiting their environmental leadership through green building are still prohibitive. In response to this trend, various organizations have established grants and other incentive programs to promote sustainable building. Likewise, *The Green Building Re\$ource Guide* seeks to encourage this concept by serving as a clearinghouse of funding resources, thereby simplifying the process of financing green building design and construction projects.

The guide lists funding opportunities from various sources, with special attention given to programs that focus their efforts in the Great Lakes states covered by U.S. EPA Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin). In addition to national private foundation grants and federal tax credits, the manual describes awards and incentives provided by state and local government and community foundations. Depending on the particular program, funds outlined in this guide are available for non-profit, for-profit and public entities conducting green building projects.

This guide is not meant for residential building or institutional research projects. It does not directly address the issues of smart growth, community planning or brownfields redevelopment. All program listings have been adapted from company publications, articles and/or internet sites. Ideas expressed in this document do not necessarily represent the policies or positions of the U.S. EPA.

It is important to note that this is not a comprehensive list, but rather a sampling of the financial resources available for green building ventures. Builders, notably those outside of Region 5, are encouraged to conduct a more extensive library or internet search to locate programs especially suited their particular project and geographic area. All funding opportunities are subject to change, and because each program is different, specific requirements, limitations and deadlines may apply. Please contact the appropriate organization for more information.

Tools

Sustainable Design Principles

CERES Principles

from the Coalition for Environmentally Responsible Economies (CERES)

- Protection of the biosphere
- Sustainable use of natural resources
- Reduction and disposal of wastes
- Energy conservation
- Risk reduction
- Safe products and services
- Environmental restoration
- Informing the public
- Management commitment
- Audits and reports

For further information contact:

CERES	Phone: (617)247-0700
11 Arlington Street, 6th Floor	Fax: (617)267-5400
Boston, MA 02116-3411	Email: <u>muzila@ceres.org</u>
	Web: www.ceres.org

Hannover Principles

prepared by William McDonough for EXPO 2000 World's Fair

- Insist on rights of humanity and nature to coexist in a healthy, supportive, diverse and sustainable condition.
- Recognize interdependence.
- Respect relationships between spirit and matter.
- Accept responsibility for the consequences of design decisions upon human well-being, the viability of natural systems and their right to coexist.
- Create safe objects of long-term value.
- Eliminate the concept of waste.
- Rely on natural energy flows.
- Understand the limitations of design.
- Seek constant improvement by the sharing of knowledge.

For further information contact:

William McDonough + Partners Phone: (804)979-1111 410 East Water Street Fax: (804) 979-1112

Charlottesville, VA 22902 Email: wmp@mcdonough.com
Web: www.mcdonough.com

Green Building Guidelines

The following green building codes and checklists are only a few examples of some of the most popular decision-making tools in use today. For more information please contact the appropriate organization.

LEED Green Building Rating System

The Leadership in Energy and Environmental Design (LEED) building rating system is a priority program of the U.S. Green Building Council. It is a voluntary, consensus-based, market-driven rating system based on existing proven technology. It evaluates environmental performance from a "whole building" perspective over a building's life cycle, providing a definitive standard for what constitutes a "green building".

LEED is designed for rating new and existing commercial, institutional and high-rise residential buildings. It is intended to be used by commercial building project stakeholders and project teams as a guide for green and sustainable design. Based on accepted energy and environmental principles, it strikes a balance between known effective practices and emerging concepts. It is a self-assessing, feature-oriented system where credits are earned for satisfying each criteria. Different levels of green building certification are awarded based on the total credits earned. The system is designed to be comprehensive in scope, yet simple in operation.

For further information contact:

U.S. Green Building Council 1015 18th Street, NW, Suite 805

Washington, DC 20036 Email: <u>leedinfo@usgbc.org</u>

Web: www.usgbc.org

Fax: (202)828-5110

Phone: (202)82-USGBC

BEES

The Building for Environmental and Economic Sustainability (BEES) software was developed under a federal interagency agreement by the National Institute of Standards and Technology with funding from EPA's Environmentally Preferable Purchasing program. Version 2.0 of the decision support software is aimed at designers, builders and product manufacturers. Based on consensus standards, it identifies products that reduce energy use, improve air quality and otherwise improve the environmental performance of buildings.

Designed to be practical, flexible and transparent, BEES is a powerful technique for balancing the environmental and economic performance of building products. BEES measures the environmental performance of building products by using the environmental life-cycle assessment approach specified in ISO 14000 standards. Economic performance is measured using the ASTM standard life-cycle cost method.

For further information contact: Email: ppic@epamail.epa.gov

Web: www.epa.gov/opptintr/epp/bees.htm

Energy Star Label for Buildings

The Energy Star Label for Buildings is a voluntary partnership between the U.S. Department of Energy, the U.S. Environmental Protection Agency and building owners and managers. Energy Star benchmarking compares buildings' energy performance to that of similar buildings throughout the US. Buildings that are among the top 25 percent nationwide in terms of energy performance and maintain a healthy and productive indoor environment can qualify to receive the Energy Star Label for Buildings.

Energy Star tools can be used to set energy performance goals and measure progress towards these goals. The Statement of Energy Performance concisely documents and communicates independently verified building energy and indoor environmental performance data. Because it documents an important financial characteristic of a building, it will eventually prove to be advantageous in business transactions involving buying, selling, appraising, leasing and/or insuring the building and contracting for energy, operations and/or maintenance services.

For further information contact:

Director, ENERGY STAR Label for Buildings Phone: 1-888-STAR-YES

U.S. Environmental Protection Agency (6202J) Email: energystarbuildings@epa.gov

1200 Pennsylvania Ave, Web: <u>www.epa.gov/buildings</u>

Washington, DC 20460

Grants and Incentives

Federal 5-year Depreciation Schedule for Solar Energy Property

Description

The federal government offers a 5-year accelerated depreciation for all solar energy equipment.

Eligibility

Any commercial entity who invests in or purchases qualified solar energy property may use the accelerated depreciation schedule.

Intended use of funds

Solar energy property that qualifies for accelerated depreciation includes: equipment that uses solar energy to generate electricity, including storage devices, power conditioning equipment, transfer equipment, and related parts, and equipment up to (but not including) the stage that transmits or uses electricity; "dual use equipment" (equipment that uses both solar and non-solar energy, such as pipes and hot water tanks) only if its use of energy from non-solar sources does not exceed 25% of its total energy input in an annual measuring period, and only to the extent of its basis or cost allocable to its use of solar energy.

Amount of money available

Deduction Schedule

Year 1 20.00%

Year 2 32.00%

Year 3 19.20%

Year 4 11.52%

Year 5 11.52%

Year 6 5.76%

Note that taxpayers who take advantage of the Federal Commercial Investment Tax Credit for solar equipment should use 95 percent of the original value of the solar equipment as the basis for depreciation, not 90 percent. If you do not take the Investment Tax Credit, you should use the full 100 percent of the value as the basis for depreciation.

Contact

Solar Energy Industries Association 1616 H Street, NW 8th Floor Washington, DC 20006

Phone: (202)628-7979 Fax: (202)628-7779

Email: plowenth@seia.org

Web: www.eren.doe.gov/consumerinfo/refbriefs/la7.html

Federal Commercial Investment Tax Credit for Solar Energy Property

Description

The investment tax credit, otherwise known as the business energy tax credit, can save businesses up to 10% of the investment or purchase and installation amount of qualified solar energy property. Solar energy property is defined as equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat.

Eligibility

Commercial entities who invest in or purchases qualified solar energy property can take the credit when income tax forms are filed.

Intended use of funds

Solar energy property that qualifies for the credit includes: equipment that uses solar energy to generate electricity, including storage devices, power conditioning equipment, transfer equipment, and related parts, and equipment up to (but not including) the stage that transmits or uses electricity; "dual use equipment" (equipment that uses both solar and non-solar energy, such as pipes and hot water tanks) only if its use of energy from non-solar sources does not exceed 25% of its total energy input in an annual measuring period, and only to the extent of its basis or cost allocable to its use of solar energy.

Amount of money available

The allowable tax credit for any one year is also limited to \$25,000, plus 25% of the total tax remaining after the credit is taken. Credit not allowable in one year may be taken in other tax years.

Contact

Solar Energy Industries Association 1616 H Street, NW 8th Floor Washington, DC 20006

Phone: (202)628-7979 Fax: (202)628-7779 Email: plowenth@seia.org

Web: www.eren.doe.gov/consumerinfo/refbriefs/la7.html

Federal Renewable Energy Production Tax Credit

Description

The Energy Policy Act established an incentive program for generators of electricity using biomass and wind energy resources to produce electricity.

Eligibility

Private entities subject to taxation (corporations, small businesses, and home owners) are eligible to receive a Production Tax Credit (PTC) for electricity sold to unrelated parties.

Intended use of funds

Eligible entities must generate electricity from wind and biomass energy and sell surplus electricity to an unrelated party.

Amount of money available

The PTC was set at $1.5 \, \text{¢}$ per (kilowatt-hour) kWh, and is adjusted annually for inflation. As of November 1999, the adjusted rate is $1.7 \, \text{¢}$ per kWh. The PTC credit applies to electricity produced from qualified sources during a ten year period after the facility is placed into service. The credit is proportionally phased out over a $3 \, \text{¢/kWh}$ range if the national average electricity price from these sources exceeds a threshold price of $8 \, \text{¢/kWh}$.

Contact

Solar Energy Industries Association 1616 H Street, NW 8th Floor Washington, DC 20006

Phone: (202)628-7979 Fax: (202)628-7779

Email: plowenth@seia.org

Web: www.eren.doe.gov/consumerinfo/refbriefs/la7.html

U.S. Department of Commerce (DOC) Small Business Innovation Research Program

Description

The goal of the program is to stimulate technological innovation in the private sector and strengthen the role of small business in meeting Federal research and development (R&D) needs. This program also seeks to increase the commercial application of innovations derived from Federal research and improve the return on investment from Federally-funded research for the economic benefit of the nation.

Eligibility

Each organization submitting a proposal must qualify as a small business for research or R&D purposes. In addition, the primary employment of the principal investigator must be with the small business at the time of the award. Consultative arrangements between firms and universities or other non-profit organizations are encouraged, with the small business serving as the prime contractor.

Intended use of funds

Firms with strong research capabilities in any of the following areas related to advanced building materials and systems are encouraged to participate: lasers for radioactivity monitoring in building materials; measurement of concrete permeability at high temperature; non-destructive monitoring of mechanical degradation of asphalt roofing; development of in-service performance monitoring system for fiber-reinforced composites; development of moisture sensor for building envelopes; measurement of building design against performance goals and standards.

Amount of money available

Phase 1: Up to \$75,000 Phase 2: Up to \$300,000

Contact

National Institute of Standards and Technology 100 Bureau Drive, Stop 2200 Gaithersburg, MD 20899-2200

Phone: (301) 975-3085 Email: <u>sbir@nist.gov</u>

Web: http://patapsco.nist.gov/ts sbir

U.S. Department of Energy (DOE) Renewable Energy Research and Development Grant

Description

These project grants are used to conduct balanced research and development efforts in renewable energy technologies. Assistance may be used to develop and transfer renewable energy technologies to the scientific and industrial communities, State, and local governments.

Eligibility

Profit organizations, private nonprofit institutions/organizations, intrastate, interstate, and local agencies and universities may apply.

Intended use of funds

Funds can be used for research and development of solar buildings, photovoltaics, solar thermal, biomass, alcohol fuels, urban waste, wind, hydropower and hydrogen, and geothermal technologies.

Amount of money available

From \$10,000 to \$100,000

Contact

U.S. Department of Energy Energy Efficiency and Renewable Energy 1000 Independence Ave., SW Washington, DC 20585

Phone: (202) 586-1660 Fax: (202)586-4403

Email: regina.washington@ee.doe.gov Web: www.cfda.gov/static/81087.asp

U.S. DOE Inventions and Innovation Program

Description

The program provides financial assistance for conducting early development and establishing technical performance of innovative, energy saving ideas and inventions. The Category 2 portion will fund well developed inventions moving towards prototype development or commercialization.

Eligibility

Grants are open to U.S. citizens, either native-bom or naturalized, small businesses that are U.S. owned, or institutions of higher learning located in the U.S. Special consideration is given to individual inventors and small businesses. At a minimum, engineering analysis and/or a bench scale model must be complete for an invention to be considered a Category 2 application.

Intended use of funds

The Category 2 competition accepts development of technologies within the areas of industry, power, transportation, or buildings. However, there is a particular interest in projects within the Office of Industrial Technologies focus industries: agriculture (bio-based products), aluminum, chemicals, forest products, glass, metalcasting, mining, petroleum, and steel.

Amount of money available

Category 2 projects are funded up to \$200,000. In addition to financial assistance, this program offers technical guidance and commercialization support to successful applicants.

Contact

U.S. Department of Energy Office of Industrial Technologies 1000 Independence Ave., SW Washington, DC 20585

Phone: (202) 586-2212 Fax: (202)586-4403

Email: <u>lisa.barnett@ee.doe.gov</u>
Web: <u>www.oit.doe.gov/inventions</u>

<u>U.S. DOE Small Business Innovation Research (SBIR) and Small Business Technology</u> <u>Transfer (STTR) Programs</u>

Description

The program seeks to increase private sector commercialization of technology developed through DOE-supported R&D, stimulate technological innovation in the private sector, and improve the return on investment from Federally-funded research for economic and social benefits to the nation. The major difference between the SBIR and STTR programs is that STTR grants *must* involve a substantial cooperative research collaboration between the small business and a non-profit research institution.

Eligibility

Only small businesses, are eligible to submit SBIR/STTR grant applications. The principal investigator's primary employment must be with the small business at the time of award and during the conduct of the proposed research.

Intended use of funds

Small businesses with strong research capabilities in science or engineering in the following areas of energy efficiency and renewable energy are encouraged to participate: zero net energy buildings; low cost power electronics and sensors for distributed energy resources; bioproducts and bioenergy research; heat transfer research; recovery, recycle, and reuse of energy intensive materials; reactive separations.

Amount of money available

SBIR Phase 1: Up to \$100,000 SBIR Phase 2: Up to \$750,000 STTR Phase 1: Up to \$100,000 STTR Phase 2: Up to \$500,000

Contact

U.S. Department of Energy SBIR/STTR Program, SC-32 19901 Germantown Road Germantown, MD 20874-1290

Phone: (301)903-1414 Fax: (301)903-5488

Email: <u>sbir-sttr@science.doe.gov</u>
Web: <u>http://sbir.er.doe.gov/sbir</u>

U.S. Environmental Protection Agency (EPA) Small Business Innovation Research Program

Description

These grants are aimed at advanced technologies in pollution prevention, air and water pollution control, solid and hazardous waste management, environmental monitoring and analytical technologies where the research will serve as a base for technological innovation and commercialization. Under the indoor environmental quality subtopic, funds are directed at: (1) determining the nature of indoor air emissions and surfaces and how they contribute to human exposure, and (2) developing cost-effective tools, techniques, and technologies necessary to prevent or reduce individual exposure to indoor environmental pollutants.

Eligibility

Applicants must qualify as a small business for research or R&D purposes at the time of award. In addition, the primary employment of the principal investigator must be with the small business concern at the time of award and during the conduct of the proposed research.

Intended use of funds

Under the indoor environmental quality subtopic of the Clean Air section areas of interest include, but are not limited to, development of: methods to prevent biocontaminant growth in the indoor environment; techniques to prevent/avoid dermal and/or ingestive exposure to hazardous chemicals on surfaces found in the indoor environment; air cleaners with improved ability to remove volatile organic compounds and small particulates from indoor air; improved particulate air filters for residential and commercial HVAC systems; innovative, cost-effective techniques for conditioning outdoor ventilation air; new consumer/commercial products, building materials, or equipment that reduce the availability of harmful contaminants within the indoor environment.

Amount of money available

Phase 1: Up to \$70,000

Contact

U.S. Environmental Protection Agency National Center for Environmental Research 1200 Pennsylvania Avenue NW Washington, DC 20460

Phone: (202) 260-7899 Fax: (202) 401-1014

Web: http://es.epa.gov/ncerqa/sbir/index.html

Illinois Department of Commerce and Community Affairs (DCCA)Renewable Energy Resources Program

Description

This program provides rebate and grant funding for projects that increase the utilization of alternative energy technologies in Illinois.

Eligibility

Eligible applicants include associations, individuals, private companies, public and private schools, colleges and universities, not-for-profit organizations and units of state and local government in Illinois.

Intended use of funds

Projects funded by this program include: hydropower (that does not involve new construction or significant expansion of hydropower dams); organic waste biomass; photovoltaic cells and panels; solar thermal energy; dedicated crops grown for energy production; wind. Eligible expenditures may include: contractual services such as subcontracts for design, construction, repairs or maintenance; fees for legal, financial, artistic or other professional services; commodities such as materials, supplies, feedstocks, fuel, etc.; equipment; other direct costs such as travel, duplication fees, data processing, etc.

Amount of money available

Rebate Projects:

Solar Thermal Energy – 50 percent with a maximum rebate of \$5,000

Photovoltaic Cells and Panels – 60 percent with a maximum rebate of \$5,000

Grant Projects:

Dedicated Crops Grown for Energy Production – 50 percent with a maximum grant of \$150,000

Solar Thermal Energy – 50 percent with a maximum grant of \$150,000

Photovoltaic Cells and Panels – 60 percent with a maximum grant of \$200,000

Wind – 60 percent with a maximum grant of \$300,000

Organic Waste Biomass – 50 percent with a maximum grant of \$550,000

Hydropower – 50 percent with a maximum grant of \$1,000,000

Contact

Illinois DCCA
Bureau of Energy and Recycling
Alternative Energy Development Section RERP
620 East Adams Street
Springfield, Illinois 62701

Phone: (217)557-1925 Fax: (217)785-2618

Email: rbuhrmes@commerce.state.il.us

 $Web: \underline{www.commerce.state.il.us/resource_efficiency/Energy/rerp.htm}$

Illinois DCCA Alternative Energy Research, Development and Demonstration Program

Description

The purpose of this program is to promote and expand the use of ethanol and alternative fuels production and utilization, as well as other innovative technologies.

Eligibility

Eligible entities include governmental organizations, for-profit and not-for-profit businesses and organizations, educational institutions and individuals in Illinois. All projects must clearly demonstrate the potential to provide an economic or environmental benefit to Illinois residents and/or the Illinois business community.

Intended use of funds

Eligible expenditures for grant funding are determined upon the type of project, but may include: costs incurred in conducting research, testing and/or demonstrating new alternative energy technologies; preparing reports; purchase of equipment; development of educational and informational materials; dissemination of information relative to the development, demonstration and promotion of alternative energy technologies.

Amount of money available

Demonstration Projects -- DCCA provides grant funding up to \$250,000 and requires a grantee investment of at least 50 percent of the total project cost. No applicant investment is required for governmental or not-for-profit entities.

Research/Development Projects -- DCCA provides grant funding up to \$200,000. No applicant investment is required.

Education/Promotion Projects -- DCCA provides grant funding up to \$60,000. No applicant investment is required.

Contact

Illinois DCCA
Bureau of Energy and Recycling
620 East Adams Street, Room 300
Springfield, IL 62701

Phone: (217)785-3969 Fax: (217)785-2618

Email: dloos@commerce.state.il.us

Web: www.commerce.state.il.us/resource efficiency/Energy/AltEnergy.htm

Illinois DCCA Institutional Conservation Program

Description

This program is designed to assist public institutions in making the effort to conserve energy. Financial and technical assistance is provided for the completion of a comprehensive study to identify energy conservation opportunities. Financial assistance is also available for specific energy conservation measures that are installed in order to accomplish this goal.

Eligibility

Eligible applicants include all K-12 schools, colleges, universities and not-for-profit hospitals located within the state of Illinois.

Intended use of funds

Two levels of assistance are provided. Technical Assistance grant funding may be used to cover the costs for contractual technical services and consultant fees. Energy Conservation Measures grant funding may be used for: design fees; equipment; materials; installation fees; labor costs; contractor overhead costs.

Amount of money available

Technical Assistance grants provide funding to hire an Illinois registered architect or engineer to complete a detailed energy study. The resulting technical assistance report will identify all feasible energy conservation measures that, if implemented, would reduce the energy consumption and the associated costs for the building. The exact amount of grant funding provided is based on the square footage of each building.

Energy Conservation Measures grants provide funding for eligible institutions to pay for the design, equipment, and/or materials, and installation of those projects recommended in the Technical Assistance Report. DCCA provides grant funding up to \$40,000 per building and \$80,000 per institution.

Both grant levels require a matching grantee investment of 50 percent.

Contact

Illinois DCCA
Bureau of Energy and Recycling
Institutional Conservation Program
620 East Adams Street
Springfield, Illinois 62701

Phone: (217)785-3983 Fax: (217)785-2618

Email: glenagha@commerce.state.il.us

Web: www.commerce.state.il.us/resource efficiency/Energy/ICP.htm

Illinois Special Assessment for Renewable Energy Systems

Description

This statute allows for a special assessment of solar energy systems for property tax purposes.

Eligibility

This statute applies to the commercial, industrial and residential sectors in Illinois.

Intended use of funds

Eligible equipment includes active and passive systems as well as wind and geothermal systems including: passive solar space heat; active solar water heat; active solar space heat; photovoltaics; wind; biomass.

Amount of money available

This statute allows solar equipment and systems to be valued at no more than a conventional energy system.

Contact

Illinois DCCA
Bureau of Energy and Recycling
620 East Adams Street
Springfield, Illinois 62701

Phone: (217)785-3969 Fax: (217) 785-2618

Email: dloos@commerce.state.il.us

Web: www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive Code=IL01F&Back=tsrch&state=

IL&type=Property

Indiana Department of Commerce Alternative Energy Systems Grants

Description

This program makes small scale grants for equipment and installation costs for alternative energy projects. Grants are available in both transportation and non-transportation applications.

Eligibility

Businesses, universities, and other institutions qualify for the grant.

Intended use of funds

Grants are available for the incremental cost of alternative fuel projects including wind, solar, photovoltaic, geothermal, hydro, biomass and waste-to-energy applications for power generation, heating and cooling. Applications are evaluated on four criteria: economic development goals, practical and technical feasibility, project economics, and energy savings.

Amount of money available

Up to \$10,000. Matching fund requirements vary.

Contact

Indiana Department of Commerce Energy Policy Division One North Capitol, #700 Indianapolis, IN 46204-2248

Phone: (317) 232-8970 Fax: (317) 232-8995

Email: ppowlick@commerce.state.in.us

Web: www.state.in.us/doc/energy/transportation.html

Indiana Department of Commerce Renewable Energy Demonstration Project Grants

Description

This program makes small-scale grants for projects that demonstrate applications of renewable energy technologies.

Eligibility

Commercial, public and nonprofit sectors are eligible for funding.

Intended use of funds

To be eligible for consideration, a project must demonstrate a commercially available technology--research projects will not be funded. Each project must demonstrate either a novel technology or a novel application of an available technology. Each project must also have a high degree of public visibility.

Amount of money available

Varies

Contact

Indiana Department of Commerce Energy Policy Division One North Capitol, #700 Indianapolis, IN 46204-2248

Phone: (317)232-8970 Fax: (317)232-8995

Email: ppowlick@commerce.state.in.us

Web: www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive Code=IN04F&Back=tsrch&state=

IN&type=Grant

Indiana Department of Commerce Public Facility Energy Efficiency Program

Description

This program provides loans from the Indiana Efficiency Loan Fund.

Eligibility

Schools, corporations, political subdivisions and public libraries are eligible.

Intended use of funds

Loans help identify and/or implement energy efficiency projects.

Amount of money available

Up to \$100,000 with zero-percent interest. Matching funds are not required.

Contact

Indiana Department of Commerce Energy Policy Division One North Capitol, #700 Indianapolis, IN 46204-2248

Phone: (317)232-8979 Fax: (317)232-8995

Email: <u>jweaver@commerce.state.in.us</u>

Web: www.state.in.us/doc/energy/residential.html

Michigan Department of Consumer & Industry Services (CIS) Small Business Energy Analysis

Description

Energy division is offering free energy analyses of small commercial buildings. Energy efficiency improvements can save your business hundreds, or even thousands of dollars, every year.

Eligibility

Your business qualifies if: it has between 5 and 50 employees; pays its own electric and/or fuel bills; has lighting and/or heating/cooling equipment 5 years or older.

Intended use of funds

The first step is to determine where your energy dollars are going and to identify energy efficiency improvements. After the site visit, a detailed report will be provided analyzing your business' energy usage and potential savings.

Amount of money available

The energy analysis is free.

Contact

Michigan CIS Energy Office P.O Box 30221 Lansing, MI 48909

Phone: (517)241-6228 Fax: (517)241-6229

Email: scott.a.devries@cis.state.mi.us

Web: www.cis.state.mi.us/opla/erd/audits.htm

Michigan CIS School and Local Government Energy Initiative

Description

This program offers both technical assistance and attractive financing for cost effective projects to improve the energy efficiency of buildings.

Eligibility

Public schools, colleges, and local governments throughout the state are eligible for program services in 2000.

Intended use of funds

Project highlights include: informational site visit to interested schools and local governments; free walk-through energy analysis and introductory energy evaluation report; listing of pre-qualified energy analysts to conduct technical energy analyses; quality review of each completed technical energy analysis report; six-month interest-free loan to pay for the technical energy analysis; low cost project financing through the Michigan Municipal Bond Authority to purchase energy efficiency improvements; a repayment schedule structured around the project's energy savings rate; project monitoring and troubleshooting.

Amount of money available

Eligible public institutions can install the recommended improvements with little or no upfront capital.

Contact

Michigan CIS Energy Office P.O. Box 30221 Lansing, MI 48909

Phone: (517)241-6281 Fax: (517)241-6229

Email: tim.a.shireman@cis.state.mi.us

Web: www.cis.state.mi.us/opla/erd/slgei.htm

Minnesota Renewable Energy Equipment Accelerated Depreciation

Description

Minnesota is the only state with accelerated depreciation provisions for renewable energy systems. Minnesota's incentive mirrors the federal modified accelerated cost recovery (MACRS) schedule for renewables. That is, a five year two hundred percent (200%) declining balance accounting method.

Eligibility

The commercial and industrial sectors are eligible for the accelerated depreciation schedule.

Intended use of funds

Renewable energy systems considered for this schedule are: passive solar space heat; active solar water heat; active solar space heat; photovoltaics; wind

Amount of money available

It was estimated by one analyst that a company installing a qualified system would realize a net project cost reduction over the first three years of six percent (6%) due to the state program and an additional twenty-five percent (25%) due to the federal program. (The difference in impact is because Minnesota's corporate tax rates are lower than U.S. corporate tax rates.)

Contact

Minnesota Department of Commerce Energy Division 121 E. 7th Place, Suite 200 St. Paul, MN 55101-2145

Phone: (651)297-2326 Fax: (651)297-1959

Email: rory.artig@state.mn.us

Web: www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive Code=MN03F&Back=tsrch&state=

MN&type=Corporate

Ohio Conversion Facilities Tax Exemption

Description

This statute exempts certain equipment from property taxation, the state sales and use tax, as well as the state franchise tax where applicable.

Eligibility

The commercial and industrial sectors are eligible for this exemption.

Intended use of funds

Technologies included are: solar thermal electricity; photovoltaics; wind; biomass; alternative fuels; waste.

Amount of money available

Upon receipt of certification from the tax commissioner, such property is exempt from all sales and use taxes.

Contact

Ohio Department of Development Office of Energy Efficiency 77 South High Street, 26th Floor P.O. Box 1001 Columbus, OH 43215-6108

Phone: (614)466-7429 Fax: (614)466-1864

Email: wmanz@odod.state.oh.us

Web: www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive Code=OH01F&Back=tsrch&state=

OH&type=Corporate

Wisconsin Solar and Wind Energy Equipment Exemption

Description

This statute exempts taxpayers from any value added by a qualified renewable energy source for property tax purposes.

Eligibility

This exemption applies to the commercial, industrial, residential and utility sectors.

Intended use of funds

Qualified technologies include: passive solar space heat; active solar water heat; active solar space heat; solar thermal electricity; photovoltaics; wind.

Amount of money available

The tax exemption is 100 percent.

Contact

Wisconsin Energy Bureau Division of Energy & Public Benefits P.O. Box 7868 Madison, WI 53707-7868

Phone: (608)266-1067 Fax: (608)267-6931

Email: alex.depillis@doa.state.wi.us

Web: www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive Code=WI01F&Back=tsrch&state=

WI&type=Property

Wisconsin Rebates for Solar Water Heating

Description

Madison Gas & Electric Company (MG&E) has made rebates for solar water heaters available to its customers since 1993. Funding for the rebates, which are considered to be part of a demand-side management initiative, comes from the utility's own revenues. MG&E does not actively promote this program to the public.

Eligibility

Both residential and commercial customers are eligible for the program.

Intended use of funds

To install a solar water heater, the customer begins the process by calling MG&E. The utility asks all the questions needed for preapproval and the customer fills out necessary paperwork when the dealer installs the system. Then, the utility sends the customer a rebate based on the size of the system.

Sometimes, a customer can acquire a rebate for installation of a renewable energy system that relies on passive solar, active solar space heat or photovoltaics. However, these alternatives to active solar water heating are only considered on a case-by-case basis.

Amount of money available

MG&E pays out \$15 for each square foot of collector area, up to 64 square feet. The maximum amount for the rebate comes to \$960.

Contact

Marketing Department Madison Gas & Electric Company PO Box 1231 Madison, 53701-1231

Phone: (608)252-7097 Email: <u>mge@mge.com</u>

Web: www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive Code=WI04F&Back=tsrch&state=

WI&type=Rebate

Wisconsin Energy Bureau Renewable Energy Assistance Program

Description

This program offers technical assistance grants and construction grants to firms and institutions wishing to build or modify commercial and industrial-sized renewable energy systems.

Eligibility

Wisconsin businesses, municipalities, state agencies, tribal governments and non-profit organizations are eligible. Investor-owned utilities and businesses with gross annual sales over \$100 million are ineligible.

Intended use of funds

Construction grants can be applied toward purchase and installation of a renewable energy system. Technical assistance grants can be applied toward designing, monitoring, testing and/or studying the feasibility of a renewable energy system. For the purposes of this program, renewable energy refers to solar energy (including day lighting), wind energy, hydropower and energy derived from biomass or geothermal sources. Biomass includes wood waste, municipal solid waste, sludge and agricultural crops as well as their residues.

Amount of money available

Construction grants will generally cover 10 percent to 20 percent of project costs, with a maximum of 25 percent. The actual grant amount is not dependent on project costs, but is determined by the size of the system, the capacity factor and the fuel being displaced. Photovoltaic projects are eligible for a payment of \$0.50/kWh for first year generation. Daylighting projects are eligible for \$0.10 per square foot of daylit area. The maximum construction grant is \$75,000.

Technical assistance grants will be made on a 50/50 cost-share basis up to a maximum grant of \$15,000.

Contact

Renewable Energy Assistance Program Wisconsin Energy Bureau 101 E. Wilson, 6th Floor PO Box 7868 Madison, WI 53707-7868

Phone: (608)266-8234 Fax: (608)267-6931

Email: alex.depillis@doa.state.wi.us

Web: www.doa.state.wi.us/depb/boe/fact_sheets/fact_sheets_view.asp?factid=17

WisconSUN Demonstration Grants

Description

WisconSUN will provide co-funding to solar energy installations and training programs that promote the transformation of Wisconsin's solar energy marketplace.

Eligibility

Eligible recipients include commercial and industrial businesses, non-profit organizations, institutions, municipal, state and tribal governments, and home owners. WisconSUN is particularly interested in funding photovoltaic (PV) systems that are owned and operated by for-profit organizations. The solar energy installation or training program must be in Wisconsin.

Intended use of funds

Active solar water heat, active solar space heat, and photovoltaics are considered for this grant.

Amount of money available

WisconSUN anticipates providing no more than \$10,000 to any given project or system owner. The implementing agency and its counterparts must provide at least a one-to-one funding match in dollars or in-kind services.

Contact

WisconSUN 7507 Hubbard Ave., Suite 200 Middleton, WI 53562

Phone: (608)831-1127 x308

Fax: (608)836-1290

Email: Wolter@MSBnrg.com

Web: www.wisconsun.org/fund/fund oppy.shtml

Wisconsin Energy Initiative 2 (WEI-2)

Description

The WEI-2 program is a partnership among the State of Wisconsin, Cooperative Educational Service Agency (CESA) advisors and energy service providers to advance the installation of cost effective energy improvements in schools and local government buildings. CESA advisors offer these organizations a range of service options to identify, select, and implement energy improvements.

Eligibility

Public and private schools, and local governments are eligible..

Intended use of funds

The WEI-2 solves the problems of time and money by facilitating energy saving improvements for both existing and new construction projects. Program options include: an energy cost-benefit study; low interest short term loans for energy studies or attorney fees; an energy study review; lease purchasing financing (tax exempt); energy use tracking; state procurement purchasing, and new construction services.

Amount of money available

The WEI-2 program provides an independent advisor to schools and local governments to better ensure project quality. It also offers the security of an independent review of an energy cost-benefit study; as well as comparative review of lender bids for project financing. Energy savings realized as a result of implementing these projects is used to make payment on project financing.

Contact

Wisconsin Department of Administration Wisconsin Division of Energy P.O. Box 7868 Madison, WI 53707-7868

Phone: (608)267-7971 Fax: (608)267-6931

Email: Energy@doa.state.wi.us

Web: www.wei-2.com

Abbott Laboratories Fund

Description

The Abbott Laboratories Fund is an Illinois not-for-profit philanthropic corporation established by Abbott Laboratories. The fund is designed to provide support through cash grants to United States-based recipients who operate in the areas of health and welfare, education, culture, art, civic, environment and public policy.

Eligibility

Priority is given to organizations that serve Abbott communities; to institutions that provide education or service to present or potential Abbott employees; and to organizations with activities directed toward the support of professions that directly or indirectly provide health care or other services in fields related to Abbott's primary areas of operation.

Intended use of funds

The fund generally gives preference to requests for one-time contributions and for programmatic and operating purposes. However, grants extending over a defined period of years or directed toward the support of specific building or other capital projects are considered as exceptions.

Amount of money available

The average grant is between \$1,000 and \$5,000.

Contact

Abbott Laboratories Fund Dept. 379, Bldg. AP6D-2 100 Abbott Park Road Abbott Park, IL 60064-6048

Phone: (847)937-6100

Web: www.abbott.com/community/lab fund.html

The Home Depot Environment Grants

Description

The Home Depot awards grants to support a variety of environmentally focused non-profit organizations throughout the communities it serves in the United States and abroad.

Eligibility

Assistance is provided to nonprofit organizations that direct efforts toward protecting natural systems.

Intended use of funds

The grants program focuses on the following areas: sustainable and green building practices; forestry and ecology; clean-up and recycling; lead poisoning prevention; consumer education.

Amount of money available

Varies

Contact

Director, Community Affairs The Home Depot 2455 Paces Ferry Road Atlanta, Georgia 30339

Phone: 1-800-430-3376

Web: www.homedepot.com/prel80/HDUS/EN US/diy main/pg diy.jsp?CNTTYPE=

NAVIGATION&CNTKEY=compinfo%2findex.jsp

The Kresge Foundation Bricks and Mortar Grant

Description

The Kresge Foundation makes grants to build and renovate facilities, challenge private giving, and build institutional capacity among nonprofit organizations. While there is no budget by geographic region, approximately ten percent of the foundation's grantmaking is in Michigan, much of it in Detroit.

Eligibility

Tax-exempt, charitable organizations operating in fields of higher education (awarding baccalaureate and/or graduate degrees), health care and long-term care, human services, science and the environment, arts and humanities, and public affairs are eligible to apply. Governmental agencies are also eligible to apply.

Intended use of funds

Funds can be used for the following: construction of facilities; renovation of facilities; purchase of major equipment or an integrated system at a cost of at least \$300,000; purchase of real estate.

Amount of money available

Recent grants have ranged between \$150,000 and \$600,000.

Contact

The Kresge Foundation 3215 W. Big Beaver Road P.O. Box 3151 Troy, Michigan 48007-3151

Phone: (248)643-9630 Fax: (248)643-0588 Web: <u>www.kresge.org</u>

The McKnight Foundation Environment Program

Description

The program has two goals: To maintain and, where necessary, restore a healthy and sustainable environment in the Mississippi River basin; and to encourage energy conservation and the use of alternative energy in Minnesota.

Eligibility

To be eligible for a grant, organizations must be classified by the Internal Revenue Service as tax-exempt nonprofit organizations that are not private foundations, or must be a government agency. The organization's mission and most of its activities must be closely related to the Foundation's priorities. Grants in the environment are available in the 10 states bordering or encompassing the Mississippi River.

Intended use of funds

Grants provide the following types of support: project support to develop or implement special programs or projects; operating support for ongoing needs and operations; capital support for buildings and equipment (further conditions apply); planning grants.

Amount of money available

In 1998, the median grant amount was \$40,000 and the largest grant paid was \$750,000.

Contact

The McKnight Foundation 600 TCF Tower 121 South Eighth Street Minneapolis, MN 55402

Phone: (612)333-4220 Fax: (612)317-0766 Web: <u>www.mcknight.org</u>

Charles Stewart Mott Foundation Building Upon Legacy Program

Description

This grant supports capital improvement/endowment activities that nurture Flint, Michigan's "centers of strength" – those groups, organizations and institutions that have the mind-set, skills and capacities that lead to change.

Eligibility

Legacy grants support institutions of higher education, cultural groups and other non-profits that have demonstrated their determination to meet the challenges faced by the greater Flint area.

Intended use of funds

Legacy grantmaking is both for building solid physical structures in the form of bricks and mortar and for building solid operational structures in the form of endowments. Outside the Flint area, support for capital development and endowment is made only when it is considered necessary to carry out or advance other Foundation objectives.

Amount of money available

The average legacy grant in 1999 was approximately \$1,268,910.

Contact

Charles Stewart Mott Foundation 1200 Mott Foundation Building Flint, MI 48502-1851

Phone: (810)238-5651 Fax: (810) 766-1753 Web: www.mott.org

The Saint Paul Foundation Grants

Description

Areas of interest for funding include education, human services, humanities, the arts and community development. Environment and nature grants are awarded under the community development area of funding.

Eligibility

Grants are authorized to nonprofit organizations and public entities primarily serving residents of the East Metro area of Ramsey, Washington and Dakota counties in Minnesota.

Intended use of funds

The Foundation will consider grant applications for: start-up costs for promising new programs that demonstrate sound management and clear goals relevant to community needs; support for established agencies which have temporary or transitional needs; multi-year funding; funds to match contributions received from other sources or to provide a challenge to help raise new contributions; capital projects, program expansion or special projects of a time-limited nature.

Amount of money available

Varies

Contact

The Saint Paul Foundation 55 East Fifth St. 600 Norwest Center Saint Paul, MN 55101-1797

Phone: (651)224-5463 Email: <u>inbox@tspf.org</u> Web: <u>www.tspf.org</u>

Annotated Reference Library

Suggested Reading

American Institute of Architects and U.S. Environmental Protection Agency. *Environmental Resource Guide*. John Wiley and Sons: 1996.

• This comprehensive reference guide presents information about the environmental performance of building materials and products. In addition, the ERG presents profiles of leading-edge projects that embrace environmental concepts and principles. Each year, supplements are offered to provide additional and updated information, which can be inserted into the ERG's loose-leaf binder.

Dianna Lopez Barnett and William D. Browning. *A Primer on Sustainable Building*. Rocky Mountain Institute: 1995.

• Written for architects, developers, general contractors, landscapers, and home owners, this book demonstrates how a holistic approach to design can result in a building even better than the sum of its parts. Topics include site and habitat restoration, transportation integration, edible landscapes, energy-efficient design, materials selection, indoor air quality, and cost implications, plus an extensive bibliography and source lists.

Stewart Brand. How Buildings Learn: What Happens After They're Built. Penguin USA: 1995.

• This book proposes that buildings adapt best when constantly refined and reshaped by their occupants. The author how shows ho to work with time rather than against it, providing many examples, photographs and drawings.

David Lloyd Jones. Architecture and the Environment: Bioclimatic Building Design. The Overlook Press: 1998.

• This beautiful book begins by placing the green building movement in historical context, relating both to other architectural movements and to vernacular building. Also included are 44 case studies of recently completed buildings from around the world that exemplify the best in environmentally sensitive architecture are arranged under six categories; mansions, houses, campuses, pavilions, metropolis, and towers.

Charles J. Kibert, ed. *Reshaping the Built Environment: Ecology, Ethics, and Economics*. Island Press: 1999.

• This book represents a collaboration of 18 practitioners of sustainable design, covering many of the key topics in the field of green design and construction. It starts with Foundations (Ethics, Economics, Ecology), moves on to the Content of the built environment (Materials, Energy, Water, and Land), and finishes with Process (Planning, Design, Construction, and Industrial Ecology).

Sandra F. Mendler and William Odell, ed. *The HOK Guidebook to Sustainable Design*. John Wiley and Sons: 2000.

 This book shows architects and designers how to integrate sustainability factors into traditional building design and quickly identify issues at every stage of the design process, from planning to construction to maintenance. It demonstrates how real, completed, sustainable design projects are economically viable and increase client satisfaction.

Victor Papanek. *The Green Imperative : Natural Design for the Real World.* Thames & Hudson: 1995.

• In this book, the author calls for a new awareness by architects and designers to take nature, climate and the elements into consideration when creating designs for buildings and products. It offers many instructive ways of assessing the environmental impact of various materials and manufacturing processes, suggesting that designers and architects possess a remarkable ability to blend the demands of aesthetics with those of technology.

David Malin Roodman, Nicholas Lenssen. *A Building Revolution: How Ecology and Health Concerns are Transforming Construction.* Worldwatch Institute: 1995.

• A report summarizing the green building movement and the issues it addresses.

Fred A. Stitt. *Ecological Design Handbook: Sustainable Strategies for Architecture, Landscape Architecture, Interior Design, and Planning.* McGraw-Hill: 1999.

• This is a collection of writings from a wide range of sources covering many aspects of ecological design in architecture and planning. It ranges from alternative energy sources to construction technologies, from permaculture to urban design, includes both "hardware"(photovoltaics, etc) and "software"(design aesthetics), and shows how, in the broad scope of ecological design, all can be incorporated into the built environment.

Alex Wilson, Jenifer L. Uncapher, Lisa A. McManigal, L. Hunter Lovins, Maureen Cureton, & William D. Browning. *Green Development: Integrating Ecology and Real Estate.* John Wiley and Sons: 1998.

• Based on 80 case studies drawn from Green Development Services' extensive worldwide research and consulting work, it distills proven procedures, potential pitfalls, and practical lessons that will help you shorten the learning curve on the path to environmentally sound, community-supportive, and financially rewarding real-estate development.

Ken Yeang. *The Green Skyscraper: The Basis for Designing Sustainable Intensive Buildings.* Prestel Verlag: 1999.

• This book presents an overview of how skyscrapers can be part of the solution to environmental problems rather than the source. It is a general framework for looking at ecological design and how this might be applied to the design of the contemporary large building with examples from the author's experiments, projects and research.

Web Resources

Advanced Building Technologies – A building professional's guide to more than 90 environmentally-appropriate technologies and practices. www.advancedbuildings.org

American Institute of Architects, Committee on the Environment – A Professional Interest Area of the AIA devoted to sustainable building design.

www.e-architect.com/pia/cote/home.asp

Argonne National Laboratory, Existing Buildings Efficiency Research Program – Develops, evaluates, and improves tools, techniques, and technologies to economize the use of energy resources and enhance the value of the resources used in existing buildings. http://BuildingsResearch.anl.gov/eber

Building Environmental Science and Technology – Provides an array of technical support and information services concerning eco-building practices, sustainable development, energy efficiency and reducing the environmental impact of building and remodeling. www.nrg-builder.com

Oak Ridge National Laboratory, Buildings Technology Center – The premier U.S. research facility devoted to the development of technologies that improve the energy efficiency and environmental compatibility of residential and commercial buildings. www.ornl.gov/ORNL/BTC

Center for Maximum Potential Building Systems – A non-profit education, demonstration, and research organization with experience in the application of appropriate technologies and sustainable design practices to meet the needs of a broad range of users, from individual home builders to regional planning and natural resource agencies.

www.cmpbs.org

Center for Resourceful Building Technology – Actively promotes resource efficiency in building design, materials selection and construction practices through research, education and demonstration.

www.crbt.org

Environmental Building News – An online newsletter on energy-efficient, resource-efficient, and healthy building practices. www.buildinggreen.com

Environmental Design + Construction – Magazine covering all aspects of environmentally sound building design and construction including recycled building products, energy efficiency, alternative energy sources, indoor air quality, systems of waste disposal and re-use, and more.

www.edcmag.com

Global Environmental Options – Provides green consulting services and free web-site information for the green design and building community.

www.geonetwork.org

GreenClips – A summary of news on sustainable building design and related government and business issues published every two weeks by email. http://greendesign.net/greenclips

Green Building: A Primer for Builders, Consumers, and Realtors – An online document that introduces the topic of resource efficient building. www.nrg-builder.com/greenbld.htm

High Performance Commercial Buildings: A Technology Roadmap – Outlines a plan to integrate research, development, and deployment for the next generation of commercial buildings.

www.eren.doe.gov/buildings/commercial_roadmap

Lawrence Berkeley National Laboratory, Center for Building Science – Develops window, lighting and glazing technologies that save energy and maximize visual and thermal comfort of building occupants, and develops software that allows architects and building engineers to design or retrofit buildings for maximum energy efficiency and occupant comfort. http://eetd.lbl.gov/BT.html

Lawrence Berkeley National Laboratory, Indoor Environment Program – Conducts a broad program of research, technology development and dissemination activities directed toward improving the health, comfort and energy efficiency of the indoor environment. http://eande.lbl.gov/IEP/IEP.html

Minnesota Sustainable Design Guide – A design tool that can be used to overlay environmental issues on the design, construction, and operation of both new and renovated facilities.

www.sustainabledesignguide.umn.edu

National Renewable Energy Laboratory – The U.S. Department of Energy's premier laboratory for renewable energy and energy efficiency research, development and deployment. www.nrel.gov

Oikos – Devoted to serving professionals whose work promotes sustainable design and construction.

www.oikos.com

Sustainable Architecture Building & Culture – A unique compendium of links and content oriented to the global community of ecological and natural building proponents. www.SustainableABC.com

Sustainable Sources – Provides resources that offer practical options to the conventional methods of building, community, travel, and more. www.greenbuilder.com

Sustainable Building Technical Manual – Shows how to design, operate, and maintain environmentally friendly buildings by laying out clear guidelines and practices for the construction industry.

www.sustainable.doe.gov/articles/ptipub.shtml

Sustainable Buildings Industry Council – A nonprofit organization offering professional training, consumer education, and energy analysis tools to advance the design, affordability, energy performance, and environmental soundness of residential, institutional, and commercial buildings nationwide.

www.sbicouncil.org

U.S. Department of Energy, Office of Building Technology State and Community Programs – A brief introduction to many topics, with links to Department of Energy programs and initiatives on energy efficiency and sustainability in buildings.

www.eren.doe.gov/buildings

U.S. Department of Energy, Building Energy Efficiency – A section of the Department of Energy website that focuses specifically on saving energy in buildings. www.eren.doe.gov/EE/buildings.html

U.S. Environmental Protection Agency – Offers a variety of energy efficiency and sustainable building programs and partnerships.

<u>www.epa.gov</u>

U.S. Green Building Council – A center for debate and action on environmental issues that seeks to accelerate the adoption of green building practices, technologies, policies, and standards. www.usgbc.org

Whole Building Design Guide – A complete Internet resource to a wide range of building-related design guidance, criteria and technology.

www.wbdg.org

Wisconsin Green Building Alliance – Provides a variety of resources, including: an annual green building conference, educational forums and site visits to green demonstration projects, a quarterly newsletter and an annual assessment survey to keep abreast of the needs of the industry.

www.wgba.org